

What is working in Energy Efficiency in the US

A Webinar

July 8, 2010

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The Regulatory Assistance Project

Vermont ♦ Maine ♦ New Mexico ♦ California ♦ Illinois ♦ Oregon ♦ Washington



About the Regulatory Assistance Project

- RAP is a non-profit organization providing technical and educational assistance to government officials on energy and environmental issues. RAP Principals all have extensive utility regulatory experience.
 - Richard Sedano was commissioner of the Vermont Department of Public Service from 1991-2001 and is an engineer.
- Funded by foundations and the US Department Of Energy. We have worked in nearly every state and many nations.
- Also provides educational assistance to stakeholders, utilities, advocates.



Focus

- Regulatory incentives and initiatives help to induce increased energy efficiency

We know that regulatory incentives are stronger if there is a foundation of clear statutory intent



Regulatory Incentives

- Implicitly then, we are talking about utilities
 - How do statutes and regulation motivate utilities regarding energy efficiency?
 - And how is it going?

Preview: There are many positive developments, but few places where the regulatory system supporting energy efficiency is well-tuned and harmonized. Low expectations are wide-spread, and where expectations are high there remain in many places internal conflicts that dampen progress.



Utilities and Energy Efficiency

- Utilities: Could be EE administrators
 - Responsible for budgets and performance
- Utilities: Could be supporters
 - Utilities have critical role in community
 - Utilities can convey **support**, **indifference** or **disdain** for energy efficiency
- Utilities: Are Utilities
 - EE will effect utilities in many ways...



Ways Energy Efficiency Affects Utilities

- Sales
- Resource Planning
- Capital Planning
- Management of Complex Organization
- Customer Relationship
- Regulatory Risk
- Earnings



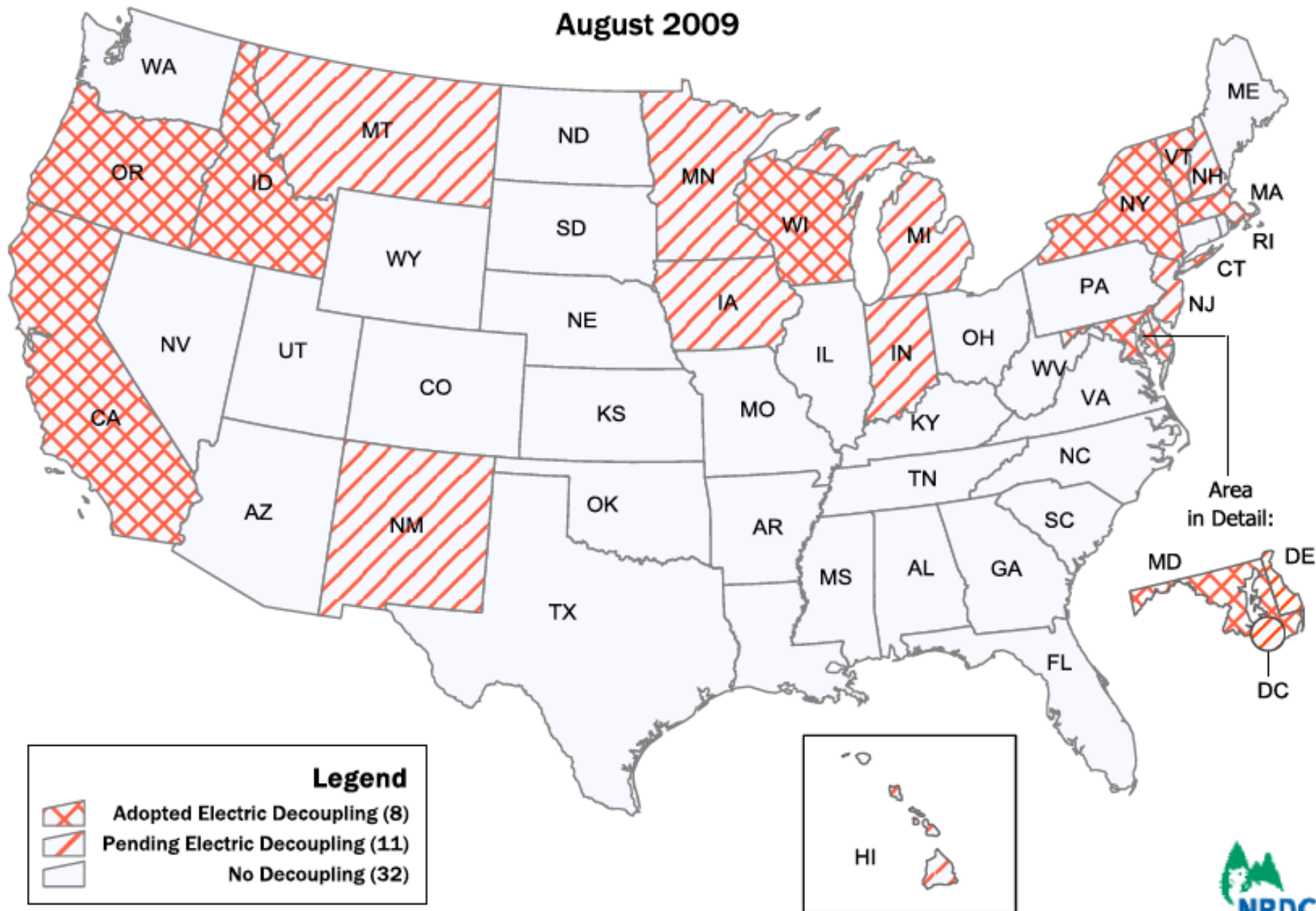
Sales

and the throughput incentive

- Bring revenue for **coverage of fixed costs**
 - Fixed costs were assessed in last rate case
 - Why should varying sales make utility and customers concerns that recovery is either too little or too much? *Decoupling is an answer*
- Ego about the size of the company
- Gross Wall Street metrics

Electric Decoupling in the US

August 2009





Resource Planning

- Supply is risky
 - Construction, siting/permitting, interest rates, changed assumptions
- Energy Efficiency can avoid power resources (and associated wires)
 - If EE itself is reliable
 - EE is generally reliable, **sound regulation makes sure**, proof in *geo-targeting and capacity markets*



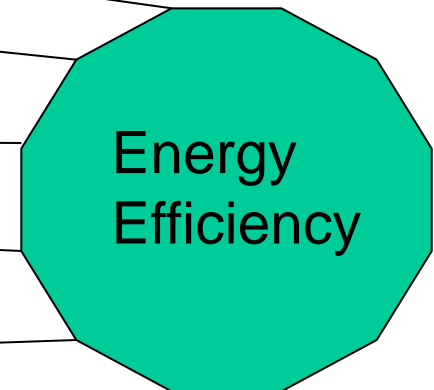
Capital Planning

- A utility has a cash flow to support a capital budget – for utilities with EE administration responsibility:
 - Energy efficiency is one among many potential uses for these funds (*resource std forces issue*)
 - Utilities also want to know **how quickly they will recover** money that they spend (prudently, of course) on energy efficiency and if there is **earning potential** to compare with other uses

Management of Complex Organization

➤ Connections to energy efficiency in utility

- Demand response
- Customer relations
- Distribution planning
- Transmission planning
- Resource planning
- Investor relations



➤ Energy Efficiency is **not a silo!**



Customer Relationship

- Utility has a ubiquitous relationship with customers
 - Relationship is not always **helpful to customer**
 - Energy efficiency tends to be popular with both retail customers and “**trade allies**,” business which support energy efficiency like wholesalers, contractors and architects
- Is the Utility #1 job “delivery” or “service?”



Regulatory Risk

- Relying just on supply and transmission can be risky to shareholders
- Energy efficiency can be risky also – cost recovery disallowances and penalties due to
 - Meeting savings goals is not a sure thing
 - Moving goalpost phenomenon
 - Irritating customers with bad programs
 - Interfering with programs with mixed messages
 - Relying on contractors can bring disappointment if management is inadequate
 - Capricious regulation



Earnings - 1

- Throughput incentive typical in traditional regulation means earnings go up and down with sales – **EE reduces sales**
- Regulation can neutralize the throughput incentive
- Earnings can go up with superior energy efficiency performance with incentives
 - Wall St will notice *cents toward EPS*
 - CEO will notice, CFO will notice



Earnings - 2

- Do utilities have a reasonable expectation to build assets for the purpose of delivering earnings to shareholders?
 - Wires assets, of course, but generation can be built or bought, so is this really a concern?
- Does energy efficiency meet resistance from utilities because of a cumulative negative effect on earnings as fewer large assets are needed?



Government can Provide Alignment, Leadership

- Comprehensive, coherent **vision** for energy
- Oversight that **aligns** utility interests with EE (regardless of administration responsibility) helps utility be a champion for EE
- Statutes **guiding** regulators to produce good results aligning with vision
 - With appropriate balance of generality and direction to account for changed circumstances



Examples of Useful Statutes from Leading States

- CA: Legislation supports stable funding for EE, RE, climate action, building codes, appliance standards, decoupling, pricing, planning, includes environment
- VT: Legislation supports stable funding for EE (whole building) including from carbon revenue, 3rd party admin, local clean energy, bldg codes, stds, decoupling, planning/geo-targeting, includes environment, smart grid
- MA: Green Communities Act a comprehensive clean energy bill
- MN: Legislation supports stable EE funding, a resource standard, planning, and decoupling
- WA: Legislation directs “all cost effective EE,” planning



Examples of Legislation Influence States New to EE

- States with energy efficiency resource standards adopted in statute in recent years:
 - Ohio, Pennsylvania, Illinois
 - All are at 2% savings as a percentage of sales
 - So a structural 2% load growth is neutralized
- Legislation in Missouri directs “all cost effective energy efficiency”



Do States Need Explicit Legislation Supporting EE?

- No, but it helps
 - And direction on “how much EE?” addresses doubts PUCs might have
- Problem: added cost today for benefits delivered over more than a decade, however
- Statutes generally support **low cost & risk management** in the long run, but PUCs are often cautious absent more explicit direction



Indicators of Successful Energy Efficiency Oversight

- Clear decision on **administration**
- Clear direction on savings **goals or targets**
- Stable commitment to **funding**
- **Cost recovery** process is clear
- **Throughput incentive** is gone
- Financial **performance incentives** on target
- Utility **Planning and Budgeting** sees EE



Statutes Can

- Declare savings targets by year
 - Focusing on outputs is superior to inputs (\$\$) though stabilizing funding is also helpful
 - Or describe objective (“all cost effective”)
- Nudge toward decoupling
- Authorize financial performance rewards
- If process seems stalled, require PUC rules
- Guide definition of cost effectiveness
- Promote innovation, program efficiency



Statutes Can

- Resolve uses of funds associated with energy efficiency and clean energy
 - Carbon revenues: how much goes to support energy efficiency?
 - Wholesale market revenues from sales of energy efficiency capacity: does this revenue go back into the energy efficiency pot?
- Encourage moving away from flat rates



Statutes Can

- Enact complementary policies
 - Building energy codes
 - Appliance and equipment efficiency standards
 - Updating provisions
 - State buildings to a higher standard
 - Fiscal support (tax policy)
 - Renewables and distributed energy provisions
 - Support “whole building” energy efficiency
 - Reporting to the Legislature on performance



Beware

- Sending mixed messages which can confuse customers and supporting businesses and discourage utilities
 - By disrupting funding
 - By promoting short term financial evaluation
 - By starving successful programs
 - By moving goal posts



Links to Statutes

- [Energy Efficiency Policy Database](#) from RAP
- [Massachusetts Green Communities Act](#)
 - [Implementation by MA DOER](#)
- [Report on Energy Efficiency to Iowa Legislature](#)
- [Vermont Statutes](#) (see 218c, for example)
- [California Public Utilities Code](#)
 - (enter 701, 454.5, 9615)



Thanks for your attention

- rapsedano@aol.com
- <http://www.raponline.org>
- RAP Mission: *RAP is committed to fostering regulatory policies for the electric industry that encourage economic efficiency, protect environmental quality, assure system reliability, and allocate system benefits fairly to all customers.*